SN08/519,420 8/18/96

```
=> s amorphous (5a)(Si or silicon) (p) laser# (p) (crystal? or recrystal?) (p)
(dangling bond# or spin(w)(state# or densit###))
         52139 AMORPHOUS
         65355 SI
        160670 SILICON

         97437 LASER#

        263468 CRYSTAL?
         71314 RECRYSTAL?

          2354 DANGLING
        170553 BOND#
           840 DANGLING BOND#
                 (DANGLING(W)BOND#)

         33083 SPIN
        792203 STATE#
        295327 DENSIT###

L1            3 AMORPHOUS (5A)(SI OR SILICON) (P) LASER# (P) (CRYSTAL? OR R
ECR
                YSTAL?) (P) (DANGLING BOND# OR SPIN(W)(STATE# OR DENSIT###)
)
=> s laser# and (amorphous (5a)(Si or silicon)) (p) (crystal? or recrystal?)
(p) (dangling bond# or spin(w)(state# or densit###))

         97437 LASER#
         52139 AMORPHOUS
         65355 SI
        160670 SILICON
        263468 CRYSTAL?
         71314 RECRYSTAL?
          2354 DANGLING
        170553 BOND#
           840 DANGLING BOND#
                 (DANGLING(W)BOND#)
         33083 SPIN
        792203 STATE#
        295327 DENSIT###
           132 (AMORPHOUS (5A)(SI OR SILICON)) (P) (CRYSTAL? OR RECRYSTAL
?)
                (P) (DANGLING BOND# OR SPIN(W)(STATE# OR DENSIT###))
L2           42 LASER# AND (AMORPHOUS (5A)(SI OR SILICON)) (P) (CRYSTAL? O
R R
                ECRYSTAL?) (P) (DANGLING BOND# OR SPIN(W)(STATE# OR DENSIT#
```

```
##)
                )
=> s l2 and 437/173,174/cclst
            571 437/173/CCLST
            194 437/174/CCLST
            717 437/173,174/CCLST
                  ((437/173 OR 437/174)/CCLST)
L3            6 L2 AND 437/173,174/CCLST
=> s l3 not l1
L4            5 L3 NOT L1
=> s l2 and 427/clas or 437/clas
          65684 427/CLAS
          22065 437/CLAS
L5        22069 L2 AND 427/CLAS OR 437/CLAS
=> s (l2 and( 427/clas or 437/clas)) not (l1 or l3)
          65684 427/CLAS
          22065 437/CLAS
L6           18 (L2 AND( 427/CLAS OR 437/CLAS)) NOT (L1 OR L3)
=> d cit l1 1-3

1.  5,453,858, Sep. 26, 1995, Electro-optical device constructed with
thin film transistors; Shunpei Yamazaki, 359/59, 85 [IMAGE AVAILABLE]

2.  5,403,762, Apr. 4, 1995, Method of fabricating a TFT; Yasuhiko
Takemura, 437/40; 148/DIG.91; 437/41, 173, 907 [IMAGE AVAILABLE]

3.  5,352,291, Oct. 4, 1994, Method of annealing a semiconductor;
Hongyong Zhang, et al., 117/8, 7 [IMAGE AVAILABLE]
=>
=> d cit l3 1-6

1.  5,529,937, Jun. 25, 1996, Process for fabricating thin film
transistor; Hongyong Zhang, et al., 437/10; 117/8; 148/DIG.1, DIG.4,
DIG.16, DIG.60; 437/13, 21, 40, 88, **174**, 907 [IMAGE AVAILABLE]

2.  5,403,762, Apr. 4, 1995, Method of fabricating a TFT; Yasuhiko
Takemura, 437/40; 148/DIG.91; 437/41, **173**, 907 [IMAGE AVAILABLE]

3.  5,231,047, Jul. 27, 1993, High quality photovoltaic semiconductor
material and **laser** ablation method of fabrication same; Stanford R.
Ovshinsky, et al., 437/101; 136/258; 148/DIG.93; 427/572, 586;
**437/173** [IMAGE AVAILABLE]

4.  4,818,717, Apr. 4, 1989, Method for making electronic matrix arrays;
Robert R. Johnson, et al., 437/52, 170, **173** [IMAGE AVAILABLE]
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5. 4,597,162, Jul. 1, 1986, Method for making, parallel preprogramming or field programming of electronic matrix arrays; Robert R. Johnson, et al., 437/52; 257/5; 359/60; 365/113, 163; 437/61, **174** [IMAGE AVAILABLE]

6. 4,522,663, Jun. 11, 1985, Method for optimizing photoresponsive amorphous alloys and devices; Stanford R. Ovshinsky, et al., 148/403; 136/258; 204/192.26; 257/55; 420/578, 903; 427/74, 578; 430/86; 437/2, 101, **173** [IMAGE AVAILABLE]

=>

=>

=> d cit l6 1-18

1. 5,521,107, May 28, 1996, Method for forming a field-effect transistor including anodic oxidation of the gate; Shunpei Yamazaki, et al., **437/42**; 148/DIG.117, DIG.163; **437/21**, **29**, **71**, **170** [IMAGE AVAILABLE]

2. 5,501,989, Mar. 26, 1996, Method of making semiconductor device/circuit having at least partially crystallized semiconductor layer; Toru Takayama, et al., **437/21**; 257/350; **437/41**, **101**, **953** [IMAGE AVAILABLE]

L7 Ghose below

3. 5,445,107, Aug. 29, 1995, Semiconductor device and method of formation; Scott S. Roth, et al., 117/8, 9, 10; **437/21**, **61**, **228** [IMAGE AVAILABLE]

4. 5,032,472, Jul. 16, 1991, Films of catenated phosphorus materials, their preparation and use, and semiconductor and other devices employing them; Christian G. Michel, et al., 428/704; **427/78**, **109**; 428/432, 469, 472.3 [IMAGE AVAILABLE]

5. 4,992,846, Feb. 12, 1991, Polycrystalline silicon active layer for good carrier mobility; Nobuyoshi Sakakibara, et al., 257/64, 66, 74, 75, 557; **437/973** [IMAGE AVAILABLE]

6. 4,873,201, Oct. 10, 1989, Method for fabricating an interconnected array of semiconductor devices; Derrick P. Grimmer, et al., **437/51**; 136/244, 258; **437/2**, **195** [IMAGE AVAILABLE]

7. 4,715,927, Dec. 29, 1987, Improved method of making a photoconductive member; Annette G. Johncock, et al., **437/16**; 118/723AN, 723MW; **427/575**; 430/65, 67 [IMAGE AVAILABLE]

8. 4,713,192, Dec. 15, 1987, Doping of catenated phosphorus materials; Christian G. Michel, et al., 252/62.3R; 148/33; 252/501.1; 257/431; **437/2**, **3**, **4**, **94**, **142** [IMAGE AVAILABLE]

9. 4,704,369, Nov. 3, 1987, Method of severing a semiconductor device; Prem Nath, et al., **437/226**; 136/258; **437/2** [IMAGE AVAILABLE]

10. 4,569,697, Feb. 11, 1986, Method of forming photovoltaic quality amorphous alloys by passivating defect states; Raphael Tsu, et al., **437/101**; 136/249, 258; **427/74**; **437/2**, **247**, **937**, **942** [IMAGE AVAILABLE]

11. 4,545,111, Oct. 8, 1985, Method for making, parallel preprogramming or field programming of electronic matrix arrays; Robert R. Johnson, **437/16**; 257/53; 359/60; 365/113, 163; **437/6**, **46**, **48**, **52**, **904** [IMAGE AVAILABLE]

12. 4,508,931, Apr. 2, 1985, Catenated phosphorus materials, their preparation and use, and semiconductor and other devices employing them; Christian G. Michel, et al., 136/255, 252, 258; 252/62.3R, 501.1, 518; 257/52; 423/299, 322; **437/5** [IMAGE AVAILABLE]

13. 4,492,810, Jan. 8, 1985, Optimized doped and band gap adjusted photoresponsive amorphous alloys and devices; Stanford R. Ovshinsky, et al., 136/255, 258; 148/33, 33.5, 33.6; 252/62.3E, 62.3R; 257/55; 420/556, 578; **427/74**, **578**; 430/85, 86 [IMAGE AVAILABLE]

14. 4,485,264, Nov. 27, 1984, Isolation layer for photovoltaic device and method of producing same; Masatsugu Izu, et al., 136/244, 245, 249, 258; 257/446; **427/74**; **437/2** [IMAGE AVAILABLE]

15. 4,443,652, Apr. 17, 1984, Electrically interconnected large area photovoltaic cells and method of producing said cells; Masatsugu Izu, et al., 136/251, 244, 258; 257/448; **437/2**, **205**, **209** [IMAGE AVAILABLE]

16. 4,419,530, Dec. 6, 1983, Solar cell and method for producing same; Prem Nath, 136/251, 244, 249, 258, 290; **437/2**, **8**, **181**, **226** [IMAGE AVAILABLE]

17. 4,357,179, Nov. 2, 1982, Method for producing devices comprising high density amorphous silicon or germanium layers by low pressure CVD technique; Arthur C. Adams, et al., **437/19**; 136/258; **427/74**, **99**, **248.1**, **567**, **586**; 430/135, 136; **437/39**, **101**, **958** [IMAGE AVAILABLE]

18. 4,322,253 Mar. 30, 1982, Method of making selective crystalline silicon regions containing entrapped hydrogen by **laser** treatment; Jacques I. Pankove, et al., **437/19**; 117/8, 930; 136/261; 219/121.6, 121.66; 257/75; **427/555**; **437/2**, **24**, **46**, **937** [IMAGE

(B4) Hydrogenated a-Si ... laser + heating + dangling bond

AVAILABLE]
=> s l2 and catalyst
        158449 CATALYST
L7   2 L2 AND CATALYST
=> d cit l7 1-2

1. 5,529,937, Jun. 25, 1996, Process for fabricating thin film transistor; Hongyong Zhang, et al., 437/10; 117/8; 148/DIG.1, DIG.4, DIG.16, DIG.60; 437/13, 21, 40, 88, 174, 907 [IMAGE AVAILABLE]

2. 5,501,989, Mar. 26, 1996, Method of making semiconductor device/circuit having at least partially crystallized semiconductor layer; Toru Takayama, et al., 437/21; 257/350; 437/41, 101, 953 [IMAGE AVAILABLE]
=>